

PART I

SECTION C

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PART I

SECTION C - DESCRIPTION/SPECS./WORK STATEMENT

C.1 - INTRODUCTION

This Performance-Based Management Contract (PBMC) is for the management and operation of the Brookhaven National Laboratory (BNL) (the Laboratory). Brookhaven Science Associates, LLC (BSA) (the Contractor) shall, in accordance with the provisions of this contract, accomplish the missions and programs authorized by the U.S. Department of Energy (DOE) and manage and operate the Laboratory. The Laboratory is one of the DOE's Office of Science (SC) multi-program laboratories. The Laboratory is a Federally Funded Research and Development Center (FFRDC) established in accordance with the Federal Acquisition Regulation (FAR) Part 35 and operated under this management and operating (M&O) contract, as defined in FAR 17.6 and DEAR 917.6.

This contract reflects the Department's effort to enable the Contractor to achieve more highly effective and efficient management of the Laboratory, resulting in a safe and secure environment, outstanding science and technology results, more cost effective operations, and enhanced Contractor accountability. Toward this end, this contract establishes a process for minimizing the use of unnecessary DOE orders by tailoring existing and new orders that will enable the Contractor to propose alternate standards, which rely primarily on state and federal laws and regulations, and management processes based on national standards, certified systems and best business practices. Contractor managers shall be held more accountable for maintaining risk mitigation as Laboratory processes and assurance models change.

This contract reflects the application of performance-based contracting approaches and techniques which emphasize results/outcomes and minimize "how to" performance descriptions. The Contractor has the responsibility for total performance under the contract, including determining the specific methods for accomplishing the work effort, performing quality control, and assuming accountability for accomplishing the work under the contract. Accordingly, this PBMC provides flexibility, within the terms and conditions of the contract, to the Contractor in managing and operating the Laboratory.

Desired results of this contract include improved Contractor operational efficiencies, allocations of Contractor oversight resources to direct mission work, and streamlined and more effective federal line management focused on a system-based approach to federal oversight with increased reliance on the results obtained from certified, nationally recognized experts and other independent reviewers. Moreover, science and technology have improved peer review metrics, and incentives to achieve extraordinary results.

Under this PBMC, it is the Contractor's responsibility to develop and implement innovative approaches and adopt practices that foster continuous improvement in accomplishing the mission of the Laboratory. DOE expects the Contractor to produce effective and efficient management structures, systems, and operations that maintain high levels of quality and safety in accomplishing the work required under this contract, and that to the extent practicable and appropriate, rely on national, commercial, and industrial standards that can be verified and certified by independent, nationally recognized experts and other independent reviewers. The Contractor shall conduct all work in a manner that optimizes productivity, minimizes waste, and fully complies with all applicable laws, regulations, and terms and conditions of the contract.

To the maximum extent practical, this PBMC shall:

- (a) Describe the requirements in terms of outcome or results required rather than the methods of performance of the work;
- (b) Use a limited number of systems-based measurable performance standards (i.e., terms of quality, timeliness, quantity, etc.) to drive improved performance and increased effective and efficient management of the Laboratory;
- (c) Provide for appropriate financial incentives (e.g., fee) when performance standards and contract requirements are achieved;
- (d) Specify procedures for reduction of fee when services are not performed or do not meet contract requirements; and
- (e) Include non-financial performance incentives where appropriate.

C.2 – IMPLEMENTATION OF DOE'S MISSION FOR BNL

The Contractor shall develop a compelling plan to implement the DOE's SC strategic mission for the Laboratory, as defined below in C.4(b)(1) "Laboratory Goals." Within this Plan, the Contractor will map the Laboratory's core competencies to this Laboratory mission. The Contractor will highlight the unique roles the Laboratory fills in SC's capability to accomplish its missions and, more broadly, that of the Department. Upon approval by the Department, the Plan shall be captured within the Brookhaven Strategic Plan, which shall be updated annually in accordance with instructions to be issued by the BHSO Site Manager.

The Performance Evaluation and Measurement Plan, as called for within the clause entitled, "Standards of Contractor Performance Evaluation," identifies performance outcomes and indicators, which are updated and agreed upon by the Parties annually,

as standards against which the Contractor's overall performance of scientific, technical, operational, and/or managerial obligations under this contract shall be assessed.

C.3 - PERFORMANCE EXPECTATIONS, OBJECTIVES, AND MEASURES

C.3.1 - Core Expectations

C.3.1.1 - General

The relationship between DOE and its national laboratory management and operating contractors is designed to bring best practices for research and development to bear on the Department's missions. Through application of these best practices, the Department seeks to assure both outstanding programmatic and operational performance of today's research programs and the long-term quality, relevance, and productivity of the laboratories against tomorrow's needs. Accordingly, DOE has substantial expectations of the Contractor in the areas of: program delivery and mission accomplishment; laboratory stewardship; and excellence in laboratory operations and financial management.

C.3.1.2 - Program Development and Mission Accomplishment

The Contractor is expected to provide effective planning, management, and execution of assigned research and development programs. The Contractor is expected to execute assigned programs so as to strive for the greatest possible impact on achieving DOE's mission objectives, to aggressively manage the Laboratory's science and technology capabilities and intellectual property to meet these objectives, and to bring forward innovative concepts and research proposals that are well-aligned with DOE missions. The Contractor shall propose work that is aligned with, and likely to advance, DOE's mission objectives, and that is well matched to Laboratory capabilities. The Contractor shall strive to meet the highest standards of scientific quality and productivity, "on-time, on budget, as-promised" delivery of program deliverables, and first-rate service to the research community through user facility operation.

The Contractor is expected to demonstrate benefit to the nation from R&D investments by transferring technology to the private sector and supporting excellence in science and mathematics

education to the extent such activities are consistent with achieving continuous progress towards DOE's core missions.

C.3.1.3 - Laboratory Stewardship

The Contractor is expected to be an active partner with DOE in assuring that the Laboratory is renewed and enhanced to meet future mission needs. Within the constraints of available resources and other Contract requirements, the Contractor, in partnership with DOE, shall:

- (a) Maintain a Laboratory vision and long-term strategic plan that addresses the evolution of Laboratory capabilities to meet anticipated DOE and national needs.
- (b) Attract, develop, and retain an outstanding work force, with the skills and capabilities to meet DOE's evolving mission needs.
- (c) Renew and enhance research facilities and equipment so that the Laboratory remains at the state-of-the-art over time and is well-positioned to meet future DOE needs.
- (d) Build and maintain a financially viable portfolio of research programs that generates the resources required to renew and enhance Laboratory research capabilities over time.
- (e) Maintain a positive relationship with the broader research community, to enhance the intellectual vitality and research relevance of the Laboratory, and to bring the best possible capabilities to bear on DOE mission needs through partnerships.
- (f) Build a positive, supportive relationship founded on openness and trust with the community and region in which the Laboratory is located.

C.3.1.4 - Operational and Financial Management Excellence

The Contractor is expected to effectively and efficiently manage and operate the Laboratory through best-in class management practices designed to enable research while assuring the protection and proper maintenance of DOE research and information assets, the health and safety of Laboratory staff and the public, and the environment. The Contractor is expected to

operate the Laboratory so as to meet all applicable laws, regulations, and requirements. The Contractor is expected to manage the Laboratory cost-effectively, striving to provide the greatest possible research output per dollar of research investment, and, accordingly, to develop and deploy management systems and practices that are designed to enhance research productivity and mission accomplishment consistent with meeting operational requirements.

C.3.2 - Performance Evaluation Expectations

The performance expectations of this contract are broadly set forth in this Section and reflect the DOE's minimum needs and expectations for Contractor performance. Specific performance work statements, performance standards (measures applied to results/outputs), acceptable performance levels (performance expectations), acceptable quality levels (permissible deviations from performance expectations), and related incentives shall be established annually, or at other such intervals determined by the DOE to be appropriate. The related incentives may be monetary, or where monetary incentives are not desirable or considered effective, the Contractor's performance may be used as a factor which directly affects the past performance report card, or a factor in a decision to reduce or increase DOE oversight or Contractor reporting, as appropriate.

In performance under this contract, the Contractor shall be evaluated within the following general performance goals and expectations:

- (a) Science and Technology - The Contractor will deliver innovative, forefront science and technology aligned with DOE strategic goals in a safe, environmentally sound, and efficient manner, and will conceive, design, construct, and operate world-class user facilities.
 - (1) Quality of Science and Technology: Produce original, creative scientific output that advances science and technology while achieving sustained scientific progress and impact that is recognized by the technical community.
 - (2) Relevance to DOE Missions and National Needs: Conduct quality scientific research that advances the missions of DOE and other national programs and contributes to U.S. leadership in international

scientific and technical communities.

- (3) Success in Constructing and Operating Research Facilities & Equipment: Provide quality strategic planning for facilities/equipment needed to insure the Laboratory can meet its S&T missions today and in the future, while effectively and efficiently maintaining current S&T facilities and equipment and providing effective, efficient operation of user facilities.
 - (4) Effectiveness and Efficiency of Research Program Management: Provide for effective capability stewardship, expert delivery, and success in relationship and risk management.
- (b) Environmental Management - The Contractor will deliver “Best-In-Class” solutions in conducting the environmental management program and support DOE in its decision making for environmental cleanup. The Contractor is committed to completing the superfund portion of the cleanup by FY 2005 or subsequent DOE approved baseline. The cleanup will be protective of the environment, risk based, cost effective, and performed in an open exchange with the community, regulators, and other stakeholders. The Contractor will continue to keep the commitments agreed to in the Memorandum of Understanding signed by Dr. Marburger and Mr. Holland on May 4, 2001 or as subsequently updated and/or superceded.
- (c) Laboratory Management and Operations - The Contractor will manage and enhance operations and management processes to provide an effective and efficient work environment that enables the execution of the BNL mission in a manner responsive to customer and stakeholder expectations.

C.3.3 - Performance Objectives and Measures

The results-oriented performance objectives of this contract are stated in the Performance Evaluation and Measurement Plan (Appendix B), and/or in the Work Authorization Directives issued

annually in accordance with the special clause entitled, "Long-Range Planning, Program Development and Budgetary Administration". The Contractor shall develop a five-year Brookhaven Strategic Plan for the overall direction of the Laboratory and for the accomplishment of these objectives. The Plan shall be actively maintained and annually updated in accordance with strategic planning instructions issued by the DOE Site Office. The objectives shall be accomplished within an overall framework of management and operational performance requirements and standards contained elsewhere in this contract. To the maximum extent practicable, these requirements and standards have also been structured to reflect performance-based contracting concepts, including the clause entitled, "Application of DOE Contractor Requirement Documents", which permits the Contractor to propose to the Contracting Officer alternative and/or tailored approaches based on national, commercial or industrial standards and best business practices to meet the outcomes desired by the Government.

DOE's Quality Assurance/Surveillance Plan (QASP) for evaluating the Contractor's performance under the contract shall consist primarily of the Performance Evaluation and Measurement Plan (PEMP) as called for within the Part II, Section I contract clause entitled, "Total Available Fee: Base Fee Amount and Performance Fee Amount". The QASP establishes the process DOE shall use to ensure that the Contractor has performed in accordance with the performance standards and expectations. The QASP shall summarize the performance standards, expectations and acceptable quality levels for each task; describe how performance will be monitored and measured; describe how the results will be evaluated; and state how the results will affect contract payment.

The Contractor shall develop and implement a Laboratory assurance process, acceptable to the Contracting Officer, which provides reasonable assurance that the objectives of the Contractor's management systems are being accomplished and that the systems and controls will be effective and efficient. The Contractor's assurance process shall reflect an understanding of the risks, maintain mechanisms for eliminating or mitigating the risks, and maintain a process to ensure that the management systems and their attendant assurance process(es) meet contract requirements.

C.4 - Statement of Work

(a) General

The Contractor shall provide the intellectual leadership and management expertise necessary and appropriate to manage, operate, and staff the Brookhaven National Laboratory (BNL, or the Laboratory); to accomplish the missions assigned by the Department of Energy (DOE or the Department) to the Laboratory; and to perform all other work described in this Statement of Work. DOE missions are assigned through strategic planning, program coordination, and cooperation between the Contractor and DOE.

Inasmuch as the assigned missions of the Laboratory are dynamic, this Statement is not intended to be all-inclusive or restrictive, but is intended to provide a broad framework and general scope of the work to be performed at the Laboratory. This Statement does not represent a commitment to, or imply funding for, specific projects or programs. All projects and programs will be authorized individually by DOE and/or other work sponsors in accordance with the provisions of this contract.

Work under this contract shall be conducted in a manner that protects the environment and assures the safety and health of employees and the public. In performing the contract work, the Contractor shall implement appropriate program and project management systems to track progress and maximize cost-effectiveness of work activities; develop integrated plans and schedules to achieve program objectives, incorporating input from DOE and stakeholders; maintain sufficient technical depth to manage activities and projects throughout the life of a program; utilize appropriate technologies to reduce costs and improve performance; and maintain Laboratory facilities as necessary to accomplish assigned missions.

(b) Mission and Major Programs

The Laboratory's mission statement will be documented annually and updated as necessary in the Brookhaven Strategic Plan. In support of major DOE sponsor organizations, the central mission of the Laboratory is to provide national scientific leadership and technological innovation to support DOE's objectives and programs.

BNL is dedicated to basic and applied investigation in a multitude of scientific disciplines, including experimental and theoretical physics, medicine, chemistry, biology, environmental research, and engineering.

Major BNL facilities include:

Relativistic Heavy Ion Collider

A recently completed accelerator designed to collide intersecting beams of heavy ions in the search for a state of matter called quark-gluon plasma.

Alternating Gradient Synchrotron

An 843 ft. diameter particle accelerator used to propel protons and heavy ions to high energies for physics research. Auxiliary facilities include the 200-MeV Linac, AGS Booster, and Booster Applications Facility.

National Synchrotron Light Source

The National Synchrotron Light Source (NSLS) is one of the principal DOE synchrotron sources. It will continue to be an essential tool for research in many disciplines. The NSLS is devoted to producing synchrotron radiation, developing new radiation sources, and developing new applications of this radiation. It will continue to provide high-intensity infrared, ultraviolet, and x-ray radiation to approximately 70 user beamlines and serve a user community of more than 2400 users from over 400 national and international institutions.

Tandem Van de Graaff

The Tandem Van de Graaff accelerators are used to bombard materials with ions for manufacturing and testing purposes. They are also used to supply RHIC with heavy ions.

High-Field MRI Facility

Used for human medical imaging studies, this facility houses a nuclear magnetic resonance instrument with a 4 Tesla whole-body magnet capable of generating one of the highest field strengths in the world for human study.

Accelerator Test Facility

The Accelerator Test Facility is used to explore new ideas on particle acceleration and the production of brighter x-ray beams for research applications.

Positron Emission Tomography (PET) Facility

The PET facility is used to image the brain for studies on the treatment of human addiction, the aging process and drug research and development.

Laser Electron Accelerator Facility (LEAF)

A picosecond laser-electron accelerator facility at BNL's Center for Radiation Chemistry Research.

Cyclotrons

Operated by the Chemistry Department, the 60-inch cyclotron and 40-inch "medical cyclotron" are used for the production of radiotracers for use in PET and MRI studies.

Transmission Electron Microscope

Operated by the Energy Sciences & Technology Department, this 300 kV field emission electron microscope is a unique probe for materials characterization.

Scanning Transmission Electron Microscope

Operated by the Biology Department, this is a custom-built electron microscope optimized for imaging unstained biological molecules with minimal radiation damage.

Many of the research activities at BNL are designed and conducted by university and industry users, with BNL maintaining the facilities and ensuring that provisions are in place to perform the activities safely and effectively.

(1) Laboratory Goals

The Laboratory's mission addresses four distinct goals: (i) performance of research in High Energy and Nuclear Physics, in Condensed Matter Physics, Chemical, and Materials Sciences, in Plant, Structural, and Environmental Biology, in Nuclear Medicine and Positron Emissions Tomography (PET) and Magnetic Resonance Imaging (MRI), and in Energy and Environmental Sciences. The Laboratory will also contribute significantly to the DOE's applied missions in Energy Resources, Environmental Quality, and National Security; (ii) development and safe and effective operation of unique national experimental facilities that are available to qualified investigators; (iii) assistance in the education and training of future generations of scientists and engineers to promote national science and education goals; and (iv) transfer of knowledge and technological innovations and fostering of productive relationships among Laboratory research programs, universities, and industry to promote national economic competitiveness. The Contractor shall provide for the participation of the community and other stakeholders in the performance of its mission.

(2) Primary Program Sponsors

Work under this contract includes scientific and technical programs sponsored by major DOE organizations. The primary sponsor of work at BNL is the Office of Science (SC), DOE. Other DOE organizations that sponsor work at BNL include:

Nonproliferation and National Security

Environmental Management
Energy Efficiency and Renewable Energy
Nuclear Energy
National Nuclear Security Administration
Counter Intelligence
Fossil Energy
Environment, Safety and Health

Additionally, the Contractor may be authorized to pursue other DOE and non-DOE missions [most notably those of the Department of Homeland Security (DHS), Nuclear Regulatory Commission (NRC), the National Institutes of Health (NIH), and the National Aeronautics Space Administration (NASA)] that derive from the Laboratory's missions and utilize the Laboratory's core competencies.

A summary of current Laboratory programs follows. Descriptions of major programs are to be updated annually in the Brookhaven Strategic Plan.

(3) Office of Science Programs

(i) Nuclear Physics

Perform frontier research in theoretical and experimental nuclear physics; build, maintain and operate state of the art user facilities for nuclear physics; perform research and development work in accelerator science, experimental detector design and computing for the Office of Science, Nuclear Physics program; operate the National Nuclear Data Center and carry out construction projects in the nuclear physics area as assigned.

In support of this mission, the contractor will operate large user facilities (AGS and RHIC) and carries on an in-house program of research in theoretical and experimental nuclear physics. Support of RHIC computing is provided by the RHIC Computing Facility at BNL. The National Nuclear Data Center is based at BNL. The work of the nuclear physics program is also supported through the expertise of BNL's Instrumentation Division, a Lab-wide development organization.

(ii) High Energy Physics

Perform frontier research in theoretical and experimental high energy physics; build, maintain and operate state of the art user facilities for high energy physics; perform research and

development work in accelerator science, experimental detector design and computing for the Office of Science, High Energy Physics program and carry out construction projects in the high energy physics area as assigned.

In support of this mission, the contractor will operate accelerator facilities (AGS and ATF) for high energy physics users and carries out an in-house program of research in theoretical and experimental high energy physics plus accelerator science. BNL collaborates in the D0 experiment at Fermi National Laboratory. BNL is the Host Laboratory for the US ATLAS Detector Project & Research Program and operates the ATLAS Tier-1 Computing Center. The work of the high energy physics program is also supported through the expertise of BNL's Instrumentation Division, a Lab-wide development organization.

- (iii) Basic Energy Sciences. The Contractor shall conduct forefront research in broad areas of materials sciences, chemical sciences, geosciences, and biosciences. Programs that take advantage of the unique scientific user facilities in materials sciences and related disciplines available at the Laboratory - for example, the National Synchrotron Light Source, the Laser Electron Accelerator Facility, and the forthcoming Center for Functional Nanomaterials – are to be encouraged. The Contractor shall manage all aspects of designated scientific user facilities, which serve the needs of academic, industrial, and government scientists.
- (iv) Biological and Environmental Research. The Contractor shall conduct programs on structural biology, nuclear medicine and functional imaging, molecular and cellular biology, climate, atmospheric and carbon sciences, and environmental remediation science and bioremediation that build on the unique facilities and expertise available at the Laboratory.
- (v) Computational and Technology Research. The Contractor shall conduct computational research including applied mathematical sciences, computer sciences, and computational sciences. The research shall emphasize both excellence and relevance, such that advances in mathematics and computer science help the Department to solve its most pressing mission-related problems. Teaming and collaboration, which bring different skills together to focus on common problems, shall be actively encouraged. To this end, the Contractor shall create and maintain an environment that reinforces collaboration with the best researchers, irrespective of

where they are located, be that within the Laboratory, at other laboratories, or at universities, within the U.S. or around the world.

The Contractor shall conduct programs in technology research, employing various modes of working with industrial partners, such as multi-year, cost-shared, cooperative research and development agreements and quick response projects which allow access by small businesses to the Laboratory's research capabilities. These projects are implemented through a variety of flexible mechanisms, such as personnel exchanges and technical assistance to and consultations with small businesses. Research topics shall be chosen that emphasize both excellence in basic research and relevance to industrial partners. The Contractor shall also conduct innovative research to explore the scientific feasibility of novel energy-related concepts in a principal-investigator mode. In this case, research topics shall be chosen such that within three years they can be taken from basic concept to the point that choices can be made about their value for development.

The Contractor shall devote appropriate attention to the management of information systems that support major experiments and other scientific data-intensive resources so as to assure their timeliness, security, utility, cost-effectiveness, and responsiveness to customers.

(4) Environmental Management

The Contractor shall plan and execute the DOE's Environmental Management Program (EM) activities in accordance with DOE program goals, initiatives, strategies, guidance letters, and approved project baselines in areas such as: (i) Environmental remediation and facility deactivation, decommissioning, decontamination, and demolition in accordance with the site's CERCLA Interagency Agreement and with DOE Orders; and (ii) Construction and maintenance of facilities to provide adequate protection of the public, employees, the environment, and Government-owned materials, facilities, and equipment in support of the overall EM mission.

The Environmental Management Program shall be conducted in a safe and cost-effective manner leading to increasing DOE, regulatory and public confidence in cleanup efforts. Program elements will include: (i) implementing comprehensive project management systems to track progress, maintain regulatory compliance, and increase cost effectiveness of work activities; (ii) developing integrated plans and

schedules for involving the participation of DOE, regulators, and other stakeholders in decision making and priority setting of environmental restoration activities; and (iii) maintaining technical depth to propose and implement cleanup activities commensurate with commercial practices in the areas of cost, implementability, schedule and public acceptability.

Specific responsibilities include:

Environmental Restoration. The Contractor shall establish and maintain systems to effectively manage and implement an environmental restoration program in accordance with goals and objectives set forth by the Department. The systems must ensure that the technical approach is consistent with DOE cleanup strategies to complete all Records of Decision in accordance with the current approved baseline; to implement an overall system to effectively and efficiently manage all groundwater and contaminated soil cleanup activities; to expedite final disposition of facilities awaiting decommissioning and decontamination; and to achieve delisting from the National Priority Listing. Contractor support shall be provided to DOE as requested by the Contracting Officer.

(5) Technology Transfer Programs

The Contractor shall contribute to U.S. technological competitiveness through research and development partnerships with industry that capitalize on the Contractor's expertise and facilities. Principal mechanisms to effect such contributions are: cooperative research and development agreements, access to user facilities, reimbursable work for non-DOE activities, personnel exchanges, licenses, and subcontracting.

The Contractor shall cooperate with industrial organizations to assist in increasing U.S. industrial competitiveness, by assisting in the application of energy science and technology R&D. Such cooperation may include an early transfer of information to industry by arranging for the active participation by industrial representatives in the Contractor's programs. Cooperation with industrial partners may include long-term strategic partnerships aimed at commercialization of Laboratory inventions or the improvement of industrial products. The Contractor shall respond to specific near-term technological needs of industrial companies with special emphasis given to working with the types of businesses identified in the Small Business Subcontracting Plan clause of this contract. The Contractor may also capitalize on its location in the Northeast by developing productive relationships with regional and local companies and through forums such as conferences, workshops, and traveling presentations. It is anticipated that these organizations will be particularly

effective participants in the Laboratory's technology transfer activities in promoting a mutually beneficial relationship between DOE and the communities surrounding the Laboratory.

Cooperation may also include use by industrial organizations of Laboratory facilities and other assistance as may be authorized, in writing, by the Contracting Officer;

(6) University and Science Education Program

The Contractor shall work with colleges and universities, with special emphasis on Historically Black Colleges and Universities/Minority Institutions, and initiate new programs to enhance science and mathematics education at all levels. The Contractor shall encourage participation by a diverse group of faculty and students in Laboratory programs to bring their talents to bear on important research problems and contribute to the education of future scientists and engineers. The Contractor shall also conduct programs for students and faculty to enrich mathematics and science education. A particular purpose of these programs is to encourage members of under-represented societal groups to enter careers in science and engineering.

The Contractor shall maintain its programs of cooperation with the academic and educational community and with nonprofit research institutions for the purpose of promoting research and education in scientific and technical fields of interest to DOE's programs. This cooperation may include, but is not limited to, such activities as: (i) joint experimental programs with colleges, universities, and nonprofit research institutions; (ii) interchange of college and university faculty and Laboratory staff; (iii) student/teacher educational research programs at the pre-collegiate and collegiate level; (iv) post-doctoral programs; (v) arrangement of regional, national, or international professional meetings or symposia; (vi) use of special Laboratory facilities by colleges, universities, and nonprofit research institutes; or, (vii) provision of unique experimental materials to colleges, universities, or nonprofit research institutions or to qualified members of their staffs.

(7) International Collaboration

In accordance with DOE policies, and in consultation with DOE, the Contractor shall maintain a broad program of international collaboration in areas of research of interest to the Laboratory and to DOE.

(8) Other Programs

The Contractor is responsible for the conduct of such other programs and activities as the Parties may mutually agree, including: (i) The providing of the facilities of the Laboratory to the personnel of public and private institutions for the conduct of research, development, and demonstration work, either within the general plans, programs and budgets agreed upon from time to time between DOE and the Contractor, or as may be specifically approved by DOE. The Laboratory facilities shall be made available on such other general bases as DOE may authorize or approve; (ii) The conduct of research and development work for non-DOE sponsors which is consistent with and complementary to the DOE's mission and the Laboratory's mission under the contract, and does not adversely impact or interfere with execution of DOE-assigned programs, does not place the facilities or Laboratory in direct competition with the private sector and for which the personnel or facilities of the Laboratory are particularly well adapted and available, as may be authorized, in writing, by the Contracting Officer; (iii) The dissemination and publication of unclassified scientific and technical data and operating experience developed in the course of the work; (iv) The furnishing of such technical and scientific assistance (including training and other services, material, and equipment), which are consistent with and complementary to the DOE's and Laboratory's mission under this contract, both within and outside the United States, to the DOE and its installations, Contractors, and interested organizations and individuals.

(c) Administration and Operation of the Laboratory

The Contractor is responsible for the operation, including management and maintenance, of the Laboratory including the planning in consultation with DOE and the making of recommendations to DOE for new buildings, facilities and utilities and alteration of existing buildings, facilities, and utilities on the Laboratory site and elsewhere, including the furnishing of all necessary basic design and operating criteria. When requested by DOE, the Contractor shall provide for the design, engineering, construction, and alteration, by subcontract or otherwise, of such buildings, facilities, and utilities on the Laboratory site and elsewhere as authorized or approved, in writing, from time to time by DOE. Where appropriate, the Contractor shall include proposals for the alternative financing of such projects. Before proceeding with other than design aspects of any project which the Contractor, acting in good faith, considers may reasonably be within the coverage of the Davis-Bacon Act (40 U.S.C. 276a and following), the Contractor shall obtain a written determination by the Contracting Officer as to the applicability of the Davis-Bacon Act to such project. When it is determined that the Davis-Bacon Act does cover a particular work project, the Contractor shall procure by subcontract the covered work in accordance with DOE approved procedures except as otherwise provided in Clause H.35 or as otherwise authorized by the Contracting Officer.

(1) Strategic Planning

The Contractor shall perform overall integrated planning, including strategic planning and the development of an annual strategic plan, covering all programs, issues and needs including, acquisition, upgrades, and management of Government-owned, leased or controlled facilities, supporting infrastructure and real property located at the site.

(2) Protection of the Worker, the Public and the Environment

The safety and health of workers and the public and the protection and restoration of the environment are fundamental responsibilities of the Contractor. Accordingly, the Contractor shall: (i) Take necessary actions, to minimize injuries and/or fatalities and prevent worker exposures and environmental releases in excess of established limits; (ii) Establish clear environmental, safety, and health priorities and manage activities in proactive ways that effectively increase protection to the environment and to public and worker safety and health; and, (iii) Carry out all activities in a manner that complies with health, safety and environmental regulations; minimizes wastes; and complies with DOE Directives.

The Contractor shall maintain a system that clearly communicates the roles, responsibilities, and authorities of line managers, and that holds line managers accountable for work practices and performance in a manner that ensures protection of workers, the public and the environment. Specifically, (i) the Laboratory Director shall hold direct reports accountable for strong leadership and management of risks within their area of responsibility; (ii) line managers shall be responsible for understanding the hazards associated with, and controls necessary for, safe performance of work; and (iii) the ES&H program shall be operated as an integral, but visible, part of how the organization conducts business, including prioritizing work and allocating resources based on risk reduction.

The Contractor shall maintain an effective management systems to identify deficiencies, resolve them in a timely manner, ensure that corrective actions are implemented (addressing the extent of conditions, root causes, and measures to prevent recurrence), and prioritize and track commitments and actions.

The Contractor shall maintain a structured, standards-based approach to planning and control of work including identification and implementation

of ES&H standards and requirements that are appropriate for the work to be performed and related hazards.

The Contractor shall maintain an organization that supports effective ES&H management by ensuring appropriate levels of ES&H staffing and competence at every level within BNL. Specifically, Contractor shall assure that employees are trained, qualified, and involved in aspects of the organization's activities, including providing input to the planning and execution of work, and identification, mitigation/elimination of workplace hazards. Contractor shall, similarly, assure that subcontractor employees are trained and qualified on job tasks, hazards, and DOE and BNL Departmental safety policies, expectations, and requirements, and shall flow applicable ES&H requirements down to subcontractors.

The Contractor must ensure that a Chronic Beryllium Disease Prevention Program (CBDPP) is prepared for the facility that meets the general CBDPP requirements specified in 10 CFR Part 850 – Final Rule issued December 8, 1999.

Finally, the Contractor shall promote effective environmental program management, through continued maintenance of ISO 14001 registration.

(3) Community Involvement

The Contractor shall maintain a systematic approach and commitment to involving the community in all aspects of the Laboratory. Accordingly, the Contractor's overall community involvement program is expected to maintain the following objectives:

- (i) Maintenance of organizational and cultural change regarding community involvement, (i.e., implementation of a strong, integrated and proactive community involvement/communications program).
- (ii) Continued indications of agreement within the community that their substantive concerns (e.g., groundwater contamination) have been or are being adequately addressed.
- (iii) Evidence of the community's increased understanding and respect for the Laboratory mission and contribution to science and technology.
- (iv) Reports from the community of positive and multiple relationships with the Laboratory and expressions of confidence in the Laboratory's decision-making processes.

- (v) Evidence of constructive external partnerships in support of DOE Science Communications objectives.
- (vi) Evaluations of the success of community involvement through periodic surveys.

In furtherance of the foregoing objectives, DOE and the Contractor agree to continue to carryout communications and community involvement activities to achieve the following:

- Brookhaven's and DOE's vision, mission, performance and contributions to science, technology and national competitiveness in the global marketplace are recognized and valued;
- Brookhaven and DOE are trusted and trusting, both internally and externally;
- Brookhaven and DOE internal and external communications are timely, open and of high quality;
- Brookhaven and DOE listen and respond to stakeholders, customers and partners in a fair and open process that encourages participation;
- All members of the Brookhaven and DOE families serve the communications needs of their internal and external stakeholders and customers knowledgeably and responsively; and
- All members of the Brookhaven and DOE family see themselves as part of a community of service sharing a common vision and applying core values.

Refer to Clause I.64 - DEAR 952.204-75 - Public Affairs, for more detail.

(4) Maintenance

In accordance with DOE standards, the Contractor shall maintain physical assets in a manner which ensures continuity of operation, fulfillment of program requirements, and ensures the property will satisfy the requirements of current use and DOE guidance.

(5) Business Management

- (i) Human Resources Management. The Contractor shall establish and maintain human resource systems which attract and retain outstanding employees, and continually motivate them to achieve high productivity in scientific research and Laboratory operations.

The Contractor also shall create and maintain at the Laboratory an environment that promotes diversity and fully utilizes the talents and capabilities of a diverse workforce. The Contractor shall seek to recruit a diverse workforce by promoting and implementing DOE and Laboratory goals. Special consideration will be given to Historically Black Colleges and Universities/Minority Institutions as potential resource pools. The Contractor shall also strive to promote diversity in all of the Laboratory's subcontracting efforts with emphasis on the use of the types of businesses identified in the Small Business Subcontracting Plan clause of this contract.

- (ii) Financial Management. The Contractor shall maintain a financial management system responsive to the obligations of sound financial stewardship and public accountability. The overall system shall include an integrated accounting system suitable to collect, record, and report all financial activities; a budgeting system which includes the formulation and executions of all resource requirements needed to accomplish projected missions and formulate short- and long-range budgets; an internal control system for all financial and other business management processes; and a disbursements system for both employee payroll and supplier payments.
- (iii) Purchasing Management. The Contractor shall have a DOE-approved purchasing system to provide purchasing support and subcontract administration. The Contractor shall, when directed by DOE and may, but only when authorized by DOE, enter into subcontracts for the performance of any part of the work under this Contract.
- (iv) Property Management. The Contractor shall have a DOE approved property management system that provides assurance that the Government owned, contractor held property is accounted for, safeguarded and disposed of in accordance with DOE's expectations and policies.
- (v) Other Administrative Services. The Contractor shall provide other administrative services, including logistics support to the DOE Brookhaven Site Office.

- (6) **Safeguards and Security.** The Contractor shall provide a safeguards and security program for the protection of Laboratory assets. The level of protection must be appropriate and cost-effective in response to the value of the assets, the potential threat and DOE directives and standards. The Contractor shall provide all the personnel necessary for a protective force consisting of uniformed guards and security inspectors.
- (7) **Legal Services.** The Contractor shall maintain legal support for all contract activities including, but not limited to, those related to patents, licenses, and other intellectual property rights; subcontracts; technology transfer; environmental compliance and protection; labor relations; and litigation and claims.
- (8) **Emergency Management.** The Contractor shall maintain an emergency management system to include emergency preparedness plans and procedures, and occurrence notification and reporting system, operation of an Emergency Operations Center and emergency response capabilities for local, regional, and national missions to include a Radiological Assistance Program.
- (9) **Information Resources Management.** The Contractor shall maintain information systems for organizational operations and for activities involving general purpose programming, data collection, data processing, report generation, software, electronic and telephone communications, and computer security. Contractor shall provide computer resource capacity and capability sufficient to support Laboratory-wide information management requirements. The Contractor also shall conduct a records management program.
- (10) **Waste Management.** Based on DOE funding guidance and other guidance documents, all waste management activities shall be managed in an integrated manner such that waste is managed consistently and in compliance with all applicable regulatory requirements. Plans for all waste generated by site clean-up activities shall be fully implemented to provide appropriate characterization, treatment, storage, transportation, disposal and technology development. Waste management activities include: (A) timely characterization, consolidation, segregation and storage of waste; (B) treatment that complies with storage and/or disposal criteria; (C) efficient shipment of waste for treatment, storage and/or disposal; (D) maintaining sufficient and compliant waste storage space at the Laboratory to accommodate waste generation and waste backlog; and (E) implementation of an effective waste minimization and pollution prevention programs.

Based on DOE funding guidance and other guidance documents, the Contractor shall provide responsive and complete waste management services for characterization, treatment and storage through the appropriate use of existing facilities, new facilities, other DOE facilities, and private sector capabilities. Additionally, the Contractor shall implement control systems which integrate research and waste management programs to assure DOE that hazardous and radiological waste will not be stockpiled at the site.

The Contractor's short- and long-range plans and activities for treatment, storage and disposal must be coordinated and integrated with DOE's national waste management program and the DOE, EM and CH Strategic Plans.

The Contractor shall fully integrate all research, environmental remediation, and operations activities so that all regulatory requirements and Federal Facility Agreements or Consent Orders related to the generation, characterization, treatment, storage and disposal of hazardous waste are met.

- (11) Self-Assessment Program. The Contractor shall conduct an ongoing self-assessment process that continually samples and validates actual program practice with prescribed DOE and Laboratory policies, standards and procedures.
- (12) Facility Operations and Infrastructure. The contractor shall assist DOE through direct participation and other support in achieving DOE's energy efficiency goals and objectives in electricity, water, and thermal consumption, conservation, and savings, including goals and objectives contained in Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. The Contractor shall maintain and update, as appropriate, its Site Plan (as required elsewhere in the contract) to include detailed plans and milestones for achieving site-specific energy efficiency goals and objectives. With respect to this paragraph, the Plan shall consider all potential sources of funds, in the following order: 1) the maximum use of private sector, third party financing applied on a life-cycle cost effective basis, particularly from Energy Savings Performance Contracts and Utility Energy Services Contracts awarded by DOE; and 2) only after third-party financing options are evaluated, in the event that energy efficiency and water conservation improvements cannot be effectively incorporated into a private sector financing arrangement that is in the best interests of the Government, then DOE funding and funding from overhead accounts can be utilized.

(d) General Responsibilities of the Parties

(1) DOE Responsibilities

DOE is responsible for all activities conducted under this contract and for assuring that Government funds are properly and effectively utilized. Accordingly, the proper discharge of such responsibilities requires that DOE shall have the authority to:

- (i) exercise appropriate general control over the contract work;
- (ii) have full access to information concerning performance of such work;
- (iii) conduct periodic and other appraisals of programmatic, project and managerial objectives and milestones and consult with the Contractor regarding these and other matters of mutual interest; and
- (iv) in accordance with other provisions of the contract, have the authority to review and approve major policies and procedures affecting administrative and operating areas.

(2) Contractor Responsibilities

The Contractor shall be responsible for the diligent and vigorous performance of the contract work in accordance with its best scientific, technical, managerial and administrative judgments. Accordingly, the proper discharge of such responsibility requires that the Contractor shall:

- (i) formulate and establish Laboratory policies and programs;
- (ii) exercise appropriate managerial control over the programmatic and operational activities of the Laboratory;
- (iii) respond, in a timely manner, to recommendations made by DOE as a result of its appraisals;
- (iv) have the right to be kept continually advised, where pertinent, of DOE's current short- and long-term objectives, and to confer with DOE with respect thereto and in connection with the formulation of plans or policies which may have a significant effect upon the Laboratory;

- (v) establish policies and objectives for cooperative research and educational programs between the scientific and technological community and the Laboratory; and
- (vi) cooperate in every reasonable way with individuals or groups whose expert or consultative services DOE may choose to use to review and evaluate the scientific, technical, or other aspects of the contract work.

C.5 - PLANS AND REPORTS

The Contractor shall prepare, submit, or disseminate otherwise public financial, schedule, scientific, and technical performance plans and reports; and other information and deliverables consistent with the needs of the various programmatic sponsors and other customers, or as required elsewhere in this Contract or as specifically required by the Contracting Officer. These periodic plans and reports shall be submitted at the intervals, and to the addresses and in the quantities as specified by the Contracting Officer. Where specific forms are required for individual plans and reports, the Contracting Officer shall provide such forms to the Contractor. The Contractor shall require subcontractors to provide reports that correspond to data requirements the Contractor is responsible for submitting to DOE. Plans and reports which may be submitted in compliance with this provision are in addition to any other reporting requirements found elsewhere in other clauses of this contract. It is the intention of DOE to consult with the Contractor in determining the necessity, form and frequency of any reports required to be submitted by the Contractor to DOE under this contract.